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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number:	10/677,876
Confirmation Number:	9683
Filing Date:	September 30, 2003
Applicant:	Glenn AIKENS et al.
Entitled:	MULTI-TIER COMPOSITE SERVICE LEVEL AGREEMENTS
Examiner:	T. Nguyen
Group Art Unit:	3689
Attorney Docket No.:	RSW920030051US1 (7161-095U)

TRANSMITTAL OF APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is Appellants' Appeal Brief in support of the Notice of Appeal dated November 23, 2010. There is **NO FEE REQUIRED** for this Appeal Brief because Appellants have already paid the fee for the Appeal Brief filed December 1, 2008, pursuant to M.P.E.P. § 1207.04, "[t]he previous paid notice of appeal fee and appeal brief fee can be applied to the new appeal." However, the Director is authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 09-0461.

Date: January 24, 2011

Respectfully submitted,

/Steven M. Greenberg/
Steven M. Greenberg
Registration No. 44,725
Customer Number 46320

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed November 23, 2010, wherein the Appellants appeal from the Examiner's rejection of claims 1-15.

I. REAL PARTY IN INTEREST

The subject patent application (the "Application") has been assigned to International Business Machines Corporation by assignment recorded on September 30, 2003, at Reel 014584, Frame 0627.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1-15 are pending in the Application and have been rejected at least twice. It is from the multiple rejections of claims 1-15 that this Appeal is taken.

IV. STATUS OF AMENDMENTS

No claims were amended after the final Office Action dated August 23, 2010 ("Final Office Action").

V. SUMMARY OF CLAIMED SUBJECT MATTER

As set forth in the first and second paragraphs on page 7 of the original specification, the Appellants' invention concerns a multi-tier, composite service level agreement (SLA). In accordance with the Appellants' invention, the components of a service offering can be separated into separate SLAs which can be combined with one another to form a composite SLA representing the complete service offering. The separate SLAs can be enforced with respect to the management of the components by the appropriate managing entities. The composite SLA, by comparison, can represent merely an aggregation of the separate SLAs. Significantly, the separate SLAs can be tiered within the composition so as to ensure that only selected portions of the separate SLAs are exposed at the correct level while others remain hidden from view.

In more particularly illustration, each SLA can be constructed based upon a discrete service offering. For instance, an external SLA can be constructed based upon an external service offering, an internal SLA can be constructed based upon an internal service offering, and an outsourced SLA can be constructed based upon an outsourced service offering. Importantly, existing SLAs can be included in the composite SLA in association with a discrete service offering inasmuch as external service offerings can include any number of external, internal and outsourced SLAs. Internal service offerings, by comparison, can include any number of internal and outsourced SLAs. Finally, outsourced service offerings cannot include any SLAs.

With specific respect to claim 1, a computer-readable storage medium having stored thereon a composite, multi-tier service level agreement (SLA) data structure has been claimed. (Fig. 2) The data structure includes a plurality of service offerings data objects (Fig.2: 240, 250, 260) having both internal use only service level objectives (Fig.2: 270A, 270B, 270C) and external service level objectives (Fig.2: 280A, 280B, 280C). (Page 8, lines 16-18) The data structure also includes a plurality of SLA data objects (Fig.2: 210, 220, 230) combined into single, composite SLA data structure. (Page 8, lines 7-11) Each of the plurality of SLA data objects corresponds to a specific one of the service offerings. (Page 8, lines 17-18) The plurality of SLA data objects in the composite SLA data structure have a hierarchical organization based upon dependencies between the service offerings. (Page 8, lines 17-18)

With specific respect to claim 4, a method, within a computer hardware device, of constructing a composite, multi-tier service level agreement (SLA) data structure has been claimed. (Fig. 1) The method includes creating an internal SLA data object for an internal service offering and further creating an external SLA data object for an external service offering which depends upon the internal service offering. (Page 8, lines 1-3) The method also includes combining the internal SLA data object with the external SLA data object to form the composite SLA data structure. (Page 7, lines 21-22) The method further includes arranging the internal and external SLA data objects in a hierarchy within the composite SLA data structure based upon dependencies between the internal and external service offerings to form the composite, multi-tier SLA data structure. (Page 8, lines 7-11)

With specific respect to claim 10, a machine readable storage device having stored thereon a computer program for constructing a composite, multi-tier service level agreement (SLA) data structure has been claimed. (Fig. 1) The computer program includes a routine set of instructions for causing the machine to perform the following operations: creating an internal SLA data object for an internal service offering (page 8, line 1); further creating an external SLA data object for an external service offering (page 8, lines 2-3) which depends upon the internal service offering (page 8, lines 1-2); combining the internal SLA data object with said external SLA data object to form the composite SLA data structure (page 7, lines 21-22); and arranging the internal and external SLA data objects in a hierarchy within the composite SLA data structure based upon dependencies between the internal and external service offerings to form the composite, multi-tier SLA data structure (page 8, lines 7-11).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The rejection of claims 4-9 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

The rejection of claims 1-3 under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent Application Publication No. 2002/0147828 by Chen et al. (Chen) in view of Applicant Admitted Prior Art (AAPA).

The rejection of claims 4-15 under 35 U.S.C. § 103(a) as being unpatentable over Chen alone or in view of Wustenhoff ("Service Level Agreement in the Data Center", 04/04/2002, article, published by Sun Microsystems, Inc.).

VII. THE ARGUMENT

THE REJECTION OF CLAIMS 4-9 UNDER 35 U.S.C. § 101

On pages 2-3 of the Final Office Action, Examiner has rejected claims 4-9 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Specifically, Examiner asserts that the claims are not tied to a particular machine.

In this regard, it is noted that the Court of Appeals for the Federal Circuit in the past had clarified the bounds of patent-eligible subject matter for process claims.[1] In Bilski, the Federal Circuit found the machine-or-transformation test the applicable test for determining patent eligibility of a process under § 101.[2] Specifically, the Federal Circuit enunciated the machine-or-transformation test as follows: "A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing."[3]

---

[1] See In re Bilski, 545 F.3d 943 (Fed. Cir. 2008) (en banc)

The Supreme Court more recently found that the machine-or-transformation test is not the exclusive test of determining patent eligibility under 35 U.S.C. § 101.[4] Rather, in the plurality opinion written by Justice Kennedy, Justice Kennedy noted that strict adherence to only "the machine-or-transformation test would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals" and that the Court would not comment on the patentability of any particular invention, "let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection."[5] Rather, the Supreme Court has found the machine or transformation test to be at best a "useful clue" as to the statutory nature of a process claim.[6]

---

[2] Id. at 956.

[3] Id. at 954 (citing Benson, 409 U.S. at 70 (1972)).

[4] See Bilski v. Kappos, No. 08-964, 561 U.S. ___ (2010), slip op. at 8.

[5] Id, slip op. at 9-10.

Importantly, the Supreme Court concluded that the operable consideration for determining the patent eligibility of claimed subject matter simply is to determine whether or not the claim at issue has attempted to patent an abstract idea.[7] While the Supreme Court did not presume to provide a rigid formula or definition for abstractness, the Federal Circuit since Bilski has determined not to define "abstract" beyond the recognition that "this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that direct primary attention on the patentability criteria of the rest of the Patent Act."[8] In the instant case, Examiner has made no attempt to demonstrate factually that the claim at issue reflects an attempt to patent an abstract idea.

In addition, it is noted that the machine-or-transformation test is a two-prong test and Examiner's rejection only relates to the first prong. Appellants submit that a person of ordinary skill in the art would readily appreciate that practicable embodiments of the claimed invention would be conducted with the aid of a computing machine, such as a server. Such computing machines are commonly understood to have memory. Further, the operations recited in the claims clearly change the state of the underlying data since the cache, register, or other memory on which the data is stored must be transformed to have a different magnetic polarity, electrical charge, or the like depending on the technology that is used. These are real physical changes. Further, memory is a real physical article. As such, Appellants submit that the method claims perform a transformation under the "machine or transformation" test and thus qualify as patent-eligible subject matter.

---

[6] Id.
[7] Id.
[8] Research Corporation Technologies, Inc. v. Microsoft Corporation, 2010-1037 at 14 (Fed. Cir. 2010)

THE REJECTION OF CLAIMS 1-15 UNDER 35 U.S.C. § 103

On pages 3-11 of the Final Office Action, Examiner has rejected claims 1-3 as being unpatentable over Chen in view of AAPA, and claims 4-15 as being unpatentable over Chen alone or in view of Wustenhoff. For the convenience of the Honorable Board, claims 2-3 stand or fall together with independent claim 1, claims 5-9 stand or fall together with independent claim 4, and claims 11-15 stand or fall together with independent claim 10. Of note, rationale (G) of the Examination Guidelines utilized by Examiner in setting forth the rejections under 35 U.S.C. § 103 require a finding that the prior art included each properly construed element claimed.

Claims 1, 4, and 10 recite similar operative portions and pertain in the aggregate to a composite, multi-tier SLA data structure. For the convenience of the Honorable Board, claim 1 is reproduced herein as follows:

> 1. A computer-readable storage medium having stored thereon a composite, multi-tier service level agreement (SLA) data structure, the data structure comprising:
>
> a plurality of service offerings data objects having both internal use only service level objectives and external service level objectives; and
>
> a plurality of SLA data objects combined into single, composite SLA data structure, each of said plurality of SLA data objects corresponding to a specific one of said service offerings, said plurality of SLA data objects in said composite SLA data structure having hierarchical organization based upon dependencies between said service offerings.

Integral to claim 1 (and also claims 4 and 10) is the combination of different SLAs into a single, composite SLA, such that each of the SLAs corresponds to a specific one of multiple different service offerings. Appellants submit that at least this limitation is not disclosed by any of the cited references or any combination thereof.

In more particular illustration, as described in the background of Appellants' originally filed patent application, service providers offer services that often can be quite complex and formed from the coordinated operation of multiple service components. Individual SLAs can address selected ones of the components, however, from the customer perspective, it can be important to consider the entire service offering in the context of an SLA for the offering as a whole. Still, the underlying components of the service offering often are managed differently by different systems by applying differing methodologies. Accordingly, an important inventive concept of the Appellant's invention includes the creation and enforcement a single, composite SLA for a composition of underlying service offerings in an enterprise by combining of a plurality of SLAs corresponding to the underlying service offerings.

At pages 16 and 17 of the final official action dated August 23, 2010 (the "Final Office Action"), Examiner argued that Chen at paragraph [0050] provided a teaching directed to the inventive concept of Appellants. Specifically, Examiner stated:

> Applicant indicated that "Applicant disagree with much of the Examiner's analysis about the "plurality of SLA combined into a single, composite SLA" as Examiner cited in CHEN, pars. 0050, 0061, 0063 and figures 5A-B. The "hierarchical set of policies" as taught in CHEN does not refer to the plurality of SLAs in the composite SLA having a hierarchical organization. However, this is not persuasive. CHEN, figures 5A-B and par. 0050 discloses" intra-SLA /inter SLA *the different Jevel ofpolicies/service are combined to achieve SLA-enabled quality* of *service* (QoS) interworking or SLA-based End-to-End Qos Provisioning; par. 0056 discloses the level of policies/service can be *represented at different levels, ranging from high level quality* of *service goals to device specific configuration parameter'.* Also Chen, par. 0061, 0062, 0065, 0068 and figures 6A-68) shows the "hierarchical organization" is based on the three levels of policies that are depended on each other and derived from SLA. Thus, this quality level of services indicates a "hierarchical organization" structure is taught in CHEN as shown above.

Chen discloses in paragraph [0050] the following:

> [0050] FIG. 5 summarises how intra-SLA/inter-SLA the different levels of policies control and the Network Service Attributes/Classes are combined to achieve SLA-enabled Resource Management, and SLA-enabled QoS Inter-working so as to achieve SLA-based End-to-End QoS Provisioning.

As can be seen from the above paragraph, Chen discloses combining different levels of policies within a SLA, but not combining a plurality of SLAs into a single, composite SLA as in the Appellants' invention.

More particularly, Chen discloses a method of transmitting a data stream from a user's terminal in a first service domain to an end point in a second service domain in a telecommunications network. The data stream is transmitted according to procedures selected so as to provide the first user with a predetermined quality of service. The quality of service is determined dependent upon the terms of the service level agreement between the user and the first service domain, and service level agreements between service domains through which the data stream passes to reach the end point.

As can be seen from the emphasized portion above, although Chen discloses that the QoS is determined dependent upon the SLA between the user and the first service domain, and SLAs between service domains through which the data stream passes to reach the end point, Chen does not disclose

combining a plurality SLAs into a single, composite SLA as in the Appellants' invention. The Appellants' invention provides a user the convenience of viewing only one single SLA instead of being confused by different SLAs for different service offerings or components received.

The remaining of the cited references does not cure the deficiency of Chen. Since Examiner has not found that the prior art included each properly construed element claimed, Applicant submits that the Examiner has not established a prima facie case of obviousness.

In view of the foregoing, reversal of the rejections under 35 U.S.C. § 103 is respectfully requested.

Date: January 24, 2010

Respectfully submitted,

/Steven M. Greenberg/
Steven M. Greenberg
Registration No. 44,725
Customer Number 46320

VIII. CLAIMS APPENDIX

1. (Previously Amended) A computer-readable storage medium having stored thereon a composite, multi-tier service level agreement (SLA) data structure, the data structure comprising:

a plurality of service offerings data objects having both internal use only service level objectives and external service level objectives; and

a plurality of SLA data objects combined into single, composite SLA data structure, each of said plurality of SLA data objects corresponding to a specific one of said service offerings, said plurality of SLA data objects in said composite SLA data structure having hierarchical organization based upon dependencies between said service offerings.

2. (Previously Amended) The computer-readable storage medium of claim 1, wherein

each of said plurality of SLA data objects corresponds to one of an outsourced service offering, an internal service offering and an external service offering.

3. (Previously Amended) The computer-readable storage medium of claim 1, wherein

at least one of said plurality of SLA data objects exposes an external service level objective of a corresponding internal service offering which has been redefined as an internal use only service level objective in an SLA data object at a higher tier in said hierarchical organization.

4. (Previously Amended) A method, within a computer hardware device, of constructing a composite, multi-tier service level agreement (SLA) data structure, the method comprising:

creating an internal SLA data object for an internal service offering;

further creating an external SLA data object for an external service offering which depends upon said internal service offering;

combining said internal SLA data object with said external SLA data object to form said composite SLA data structure; and

arranging said internal and external SLA data objects in a hierarchy within said composite SLA data structure based upon dependencies between said internal and external service offerings to form said composite, multi-tier SLA data structure.

5. (Previously Amended) The method of claim 4, further comprising:

creating an outsourced SLA data object for an outsourced service offering upon which at least one of said external and internal service offerings depend;

combining said outsourced SLA data object in said composite SLA data structure; and

arranging said outsourced SLA data object along with said internal and external SLA data objects in said hierarchy.

6. (Previously Amended) The method of claim 4, further comprising

redefining an external service level objective in an SLA data object which has been combined and arranged in said composite SLA data structure to an internal use only service level objective.

7. (Previously Amended) The method of claim 5, further comprising

redefining an external service level objective in an SLA data object which has been combined and arranged in said composite SLA data structure to an internal use only service level objective.

8. (Previously Amended) The method of claim 4, further comprising

exposing said composite, multi-tier SLA data structure to a customer over a data communication network.

9. (Previously Amended) The method of claim 4, wherein

the arranging comprises prohibiting dependency loops within said hierarchy.

10. (Previously Amended) A machine readable storage device having stored thereon a computer program for constructing a composite, multi-tier service level agreement (SLA) data structure, the computer program comprising a routine set of instructions for causing the machine to perform the operations of:

creating an internal SLA data object for an internal service offering;

further creating an external SLA data object for an external service offering which depends upon said internal service offering;

combining said internal SLA data object with said external SLA data object to form said composite SLA data structure; and,

arranging said internal and external SLA data objects in a hierarchy within said composite SLA data structure based upon dependencies between said internal and external service offerings to form said composite, multi-tier SLA data structure.

11. (Previously Amended) The machine readable storage device of claim 10, further comprising:

creating an outsourced SLA data object for an outsourced service offering upon which at least one of said external and internal service offerings depend;

combining said outsourced SLA data object in said composite SLA data structure; and

arranging said outsourced SLA data object along with said internal and external SLA data objects in said hierarchy.

12. (Previously Amended) The machine readable storage device of claim 10, further comprising

redefining an external service level objective in an SLA data object which has been combined and arranged in said composite SLA data structure to an internal use only service level objective.

13. (Previously Amended) The machine readable storage device of claim 11, further comprising

redefining an external service level objective in an SLA data object which has been combined and arranged in said composite SLA data structure to an internal use only service level objective.

14. (Previously Amended) The machine readable storage device of claim 10, further comprising

exposing said composite, multi-tier SLA data structure to a customer over a data communication network.

15. (Previously Amended) The machine readable storage device of claim 10, wherein

the arranging comprises prohibiting dependency loops within said hierarchy.

IX. EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

X. RELATED PROCEEDINGS APPENDIX

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.